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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/844,843

Applicant(s)

PRUTEANU ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 36-48 is/are pending in the application.
- 4a) Of the above claim(s) 46-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 16 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Newly submitted claims 46-48 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 36-45, drawn to a container handling system, classified in class 414, subclass 408.
- II. Claims 46-48, drawn to a container handling system, classified in class 414, subclass 421.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as sensing systems for the boom extension and arm position. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 46-48 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 10/16/02 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

As indicated by applicant, appropriate material corresponding to the drawing should be added to the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 36-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 36, line 9, "to operate of" is not understood.

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In claims 37-38 and 41-42, last line, it is not understood what is meant by “attached to sense”, and it is unclear to what “the said position of said ... actuator” refers.

In claim 38, line 2, “as” should apparently be --has--;

and line 3, the recitation “a said ... shaft” is unclear.

In claims 41-42, line 2, --arrangement-- should be inserted after “arm”.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 36, 43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Brandt '100, previously cited by applicant.

Brandt shows a container handling system mounted on a side loading refuse vehicle including extensible boom 24, mechanized arm arrangement 26 comprised of a single shaped arm member operated by a hydraulic cylinder, container grabber device 28, position sensing system 150 for sensing the boom extension, position sensing system 152 for sensing the arm rotation, actuators 66, 68, and 118-120 for extending/ retracting the boom, rotating the arm arrangement, and operating the grabber device, respectively, and a programmed microprocessor control system for operating the container handling system. The arm arrangement is at least to some extent

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considered to be “curved”, as broadly claimed (such as at the upper and lower ends thereof, shown in figure 5). Although there is no explicit disclosure that this shape is used “to reduce lateral and height clearance required”, since the claim fails to set forth this limitation in relation to anything, the reference is inherently considered to at least somewhat possess such capability.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 37-38 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Sizemore et al, previously cited.

Brandt shows the arm actuator to be a hydraulic cylinder rather than a hydraulic rotary actuator.

Sizemore et al show a side loading refuse collection vehicle which utilizes rotary actuator 49 to rotate arm 18.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by substituting the arm hydraulic cylinder thereof with a rotary actuator, as Sizemore et al show that this would be an alternate equivalent expediency in the same environment.

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Re claim 38, the use of a pair of parallel spaced arms rather than a single solid arm is considered an obvious design choice. To connect such arms to opposite ends of a double-ended output shaft of the rotary actuator would have been a mere design expediency.

Re claims 41-42, the sensors of Brandt are potentiometers with rotating shafts. As best understood, such a structure is considered to be an “angular displacement transducer”. On the other hand, the use of angular displacement transducers, if not inherent, is considered an obvious design expediency.

10. Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al, previously cited.

Brandt does not disclose controlling the rotational speed of the arm based on the sensed arm position, although the ability to avoid slamming the container into the ground after the dump cycle is completed is disclosed, which ability is based on the sensed arm position.

Duell et al show an automated refuse vehicle wherein the rotational speed of the dumping arm 26 can be controlled according to several parameters, and at least to some extent is based on an arm position sensor AP<sub>1</sub> (potentiometer).

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by controlling the rotational speed of the arm based on the arm position sensor, as suggested by Duell et al, as this would provide greater efficiency and flexibility when operating in the automatic dump cycle mode.

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11. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Sizemore et al, as applied to claim 37 above, and further in view of Duell et al.

To have further modified the apparatus of Brandt and Sizemore et al by controlling the rotational speed of the arm based on the sensed position thereof, as shown by Duell et al, would have been obvious for the same reason set forth in the immediately preceding paragraph.

12. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al and Tordenmalm et al, previously cited.

As noted in paragraph 10 above, it would have been obvious to have modified Brandt in view of Duell et al. Duell et al disclose that the cylinder endpoints are “cushioned” so that the pistons are not banged into the cylinders at the end of travel. As best understood, this is a mechanical damping means. Thus, although the apparatus of Brandt as modified by Duell et al would have a damping means, it would not be part of the control system.

Tordenmalm et al show a control system for damping a piston as it approaches its end position in a hydraulic cylinder, including sensing means and a braking system operating in response thereto.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by utilizing a control means for damping the piston as it approached its end of travel in the cylinder, as suggested by the combined teachings of Duell et al



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and Tordenmalm et al, as this would simply be a well known expediency in the art for reducing shock and damage to the piston/cylinder assemblies.

13. Claims 36, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al (US 5,833,429), previously cited by applicant.

While Brandt alone is considered to anticipate these claims, the following rejection is used to strengthen the examiner's position in the event it is determined that the arm is not curved and/or the claim is amended to more fully define such a curve.

McNeilus et al show a container handling system similar to that of Brandt (same assignee), including several embodiments of arm arrangements. Some (see esp. Figures 5 and 8) have a curved or bent arm structure.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by utilizing a curved arm structure as shown by McNeilus et al, if not inherent therein, as this is shown to be an alternate equivalent arm structure in the same environment. Again, such a structure is considered to at least extent reduce the clearance required for operation of the arm arrangement.

14. Claims 37-38 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claim 36 above, and further in view of Sizemore et al.

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This rejection utilizes the same obviousness rationale set forth in paragraph 9 above.

15. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claim 36 above, and further in view of Duell et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 10 above.

16. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al and Sizemore et al, as applied to claims 36 and 37 above, and further in view of Duell et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 11 above.

17. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of McNeilus et al, as applied to claims 36 and 43 above, and further in view of Duell et al and Tordenmalm et al.

This rejection utilizes the same obviousness rationale set forth in paragraph 12 above.

18. Applicant's arguments filed 10/16/02 have been fully considered but they are not persuasive.

Applicant's only statement concerning the anticipatory Brandt reference is the conclusory statement that Brandt "does not show the claimed inventive mechanical features". However, as

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indicated above, it is the examiner's opinion that Brandt does show all claimed features, including the curved arm structure. Furthermore, even if the arm structure was more fully defined, the newly proposed combination of Brandt in view of McNeilus et al is considered to render obvious the inclusion of such a feature.

Although applicant also sets forth arguments concerning the teaching reference Sizemore et al, there is no discussion of the obviousness statement. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is (703) 308-2559.

The fax phone number for the organization where this application or proceeding is assigned is 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.

jwk

December 19, 2002

  
**JAMES W. KEENAN**  
**PRIMARY EXAMINER**